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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/348,518	07/07/99	MURAKAMI	H 31050.5US01

EXAMINER	
BROADHEAD, B	
ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)	
	09/348,518	MURAKAMI ET AL.	
	Examiner	Art Unit	
	Brian J. Broadhead	3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 May 2001* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4, 6, 14* .
18) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other: .

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 4-10-01 has not been considered because all of the documents listed on it are already of record in the case as being cited by either prior information disclosure statements or by the examiner.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 11 through 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Tagami et al., 5812070.

As per claim 11, Tagami et al. discloses a sensor associated with and installed on each vehicle for sensing the SAE of the associated vehicle on lines 63-67, on column 5; a vehicle subsystem including a wireless communication unit installed on each vehicle and couple to SAE sensor for transmitting information corresponding to the SAE sensed by the sensor on lines 27-28, on column 4; and a central station coupled in wireless communication with said wireless communication units, including a tracking system that provides vehicle location information for each vehicle and a computer system for receiving wireless communication and programmed to process SAE

information and vehicle location information to select and allocate vehicles to users based on SAE information and vehicle location on lines 12-19, on column 5. If the system knows the battery charge it is inherent that there is some type of charge sensor.

As per claim 12, Tagami et al. discloses the central system is further programmed to define a vehicle search group for each port in which one or more vehicles from the fleet may be present at any given time and to select and allocate a vehicle for a user at a given port from the vehicle search group defines on lines 40-67, on column 5.

As per claim 13, Tagami et al. discloses the central system is programmed to process vehicle location information for a vehicle due to arrive at a given port, to provide an estimated time of arrival of the vehicle at that port and for including the vehicle in the vehicle search group for that port if the estimated time of arrival is within a predefined time period on lines 36-67, on column 4.

As per claims 14, 15, and 16, Tagami et al. discloses each vehicle being powered by an electric battery and the SAE is the state of charge of the battery on line 63, on column 5; each port includes a charging facility for selectively coupling to a vehicle to increase the SOC of the vehicle on lines 10-14, on column 7; and said central system is programmed to process vehicle location information and SAE information to include a vehicle in the vehicle search group of a given port if the vehicle is located at a charging facility at the port and has a charging time period which is dues to expire within a predetermined time period on lines 27-34, on column 8.

As per claim 17, Tagami et al. discloses charging order is defined by the order of SAE's, with the lowest going first on lines 10-14, on column 7.

As per claim 18, Tagami et al. discloses said charging facility defines a charging rate for each vehicle as the vehicles increasing SOC over the charging period and wherein the plot of the charging rate of each vehicle includes a generally linear region and a nonlinear section and assigning vehicles to charger if SOC of the vehicle is in the linear region on lines 10-14, on column 7.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 4, 19, 22, 2, 3, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kane et al., 6078850, in view of Tagami et al., 5812070.

Kane et al. discloses a sensor installed on the vehicle for sensing SAE of the vehicle on line 40, on column 2; a vehicle subsystem including a wireless communication unit installed on the vehicle and operatively coupled to the sensor for transmitting SAE information corresponding to a SAE sense by the sensor and a central station including a computer system coupled in wireless communication with said

wireless communication unit for receiving and processing SAE information transmitted by said wireless communication unit on lines 46-47, on column 2; and the central station comprises a recording device and said SAE processing comprises recording SAE information on lines 15-19, on column 3. Kane does not disclose the SAE is the SOC of a battery and the sensor senses the SOC of the battery; the central station comprises a display device and said processing SAE information comprises displaying SAE information; and that the location information and stored amount of energy information are used for vehicle allocation by the central computer in a vehicle sharing system. Tagami et al. teaches the SAE is the SOC of a battery and the sensor senses the SOC of the battery on lines 14-16, on column 4; and the central station comprises a display device and said processing SAE information comprises displaying SAE information on line 29, on column 5; and that the location information and stored amount of energy information are used for vehicle allocation by the central computer in a vehicle sharing system on line 63, on column 5 through line 16, on column 6. It would have been obvious to one of ordinary skill in the art to use the battery and display of Tagami et al. in the invention of Kane et al. because Tagami teaches of using his invention in an electric battery system or in a internal combustion system and from his teaching one would know that internal combustion engines and electric motor with battery systems could be used interchangeably.

5. Claims 5, 6, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kane et al., 6078850and Tagami et al., 5812070, in view of Kikuchi et al., 6133707.

6. As per claim 5 and 23, Kane et al. and Tagami et al. disclose all the limitations as set forth above. Kane et al. and Tagami et al. do not disclose comparing a sensed SAE with a previously sensed SAE to generate a first signal in response to a change between the compared SAEs greater than a predefined value. Kikuchi et al. teaches disclose comparing a sensed SAE with a previously sensed SAE to generate a first signal in response to a change between the compared SAEs greater than a predefined value on lines 21-26, on column 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the comparing of Kikuchi et al. in the invention of Kane et al. and Tagami et al. because it would warn of abnormal operations.

7. As per claim 6, Kane et al. discloses a display device in the vehicle and a processor operatively couple to the display device and in wireless communication with the computer system and programmed to respond to a first signal from the computer system to display a first warning on the display on lines 27-38, on column 8.

8. Claims 7, 8, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kane et al. and Tagami et al., 5812070, in view of Kikuchi et al. as applied to claims 6 and 23 above, and further in view of Tabata et al., 5908453.

9. Kane et al., Tagami et al., and Kikuchi et al. disclose all the limitations as set forth above. They do not disclose determining when the SAE is greater than a predetermined value and generating a second signal in response to the sensed SAE being less than a predefined minimum and then displaying a warning message on the vehicle display device. Tabata et al. teaches determining when the SAE is greater than

a predetermined value and generating a second signal in response to the sensed SAE being less than a predefined minimum and then displaying a warning message on the vehicle display device on lines 25-32, on column 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the warning of Tabata et al. in the invention of Kane et al. Tagami et al., and Kikuchi et al. because such modification would provide more useful features to an SAE system.

10. Claims 9, 10 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kane et al., 6078850, and Tagami et al., 5812070, in view of Tabata et al., 5908453.

Kane et al. and Tagami et al. disclose all the limitations as set forth above. Kane et al. and Tagami et al. do not disclose determining when the SAE is greater than a predetermined value and generating a second signal in response to the sensed SAE being less than a predefined minimum and then displaying a warning message on the vehicle display device. Tabata et al. teaches determining when the SAE is greater than a predetermined value and generating a second signal in response to the sensed SAE being less than a predefined minimum and then displaying a warning message on the vehicle display device on lines 25-32, on column 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the warming device of Tabata et al. in the invention of Kane et al. and Tagami et al. to prevent the vehicle from falling to too low of a SAE and make energy control simpler.

Response to Arguments

11. Applicant's arguments filed 5-8-01 have been fully considered but they are not persuasive. The examiner does not agree with the statement that continuous monitoring is inherent in a wireless system on page 8 of the amendment. Just because things are in communication with each other does not mean that the results of all monitored systems are transmitted to a central station. This would be a waste of bandwidth. That limitation would need to be added to the claims because it is not inherent.

12. In regards to the addition of the limitation that stored amount of energy and vehicle location are used to allocate vehicles by the central station, this limitation was already shown to be disclosed in the prior art in the rejection of claims 11 through 18 and has resulted in the new rejections under 35 U.S.C. 103.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

14. Hatanaka et al., 6154006, discloses a battery rental system.

15. Kondo et al., 6181991, discloses an electric vehicle sharing system.

16. Smith et al., 6185501, discloses methods and apparatus for loading or modifying a vehicle database from a remote computer via a communications network and a fuel or current dispenser.

17. Jenkins et al., 6253129, discloses a system for monitoring vehicle efficiency and vehicle and driver performance.

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Broadhead whose telephone number is 703-308-9033. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William A. Cuchlinski can be reached on 703-308-3873. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

BJB
July 11, 2001

JACQUES H. LOUIS-JACQUES
PRIMARY EXAMINER